WHAT IS CLAIMED IS:

1. A vehicle seat (1; 100; 200), in particular for a passenger car, comprising:

a backrest (3; 103; 203) and a head restraint (7; 105; 205) which is arranged on the upper end of the backrest, said head restraint having a generally clamshell-type shape including a head restraint rear part (9; 105A; 205A) mounted essentially rigidly in the backrest and a head restraint front part pivotally connected to an upper end of the rear part about an essentially horizontal rotational axis (15; 105B; 205B); and

at least one driving device (17; 19; 21; 107; 207) for pivoting the head restraint front part about the rotational axis in response to at least one control signal operative to actuate such pivoting.

2. Vehicle seat according to claim 1, wherein said at least one control signal is indicative of a vehicle impact.

3. Vehicle seat according to claim 1, wherein said at least one control signal is indicative of a desired inclination of the head restraint for the purpose of adjusting the inclination.

4. Vehicle seat according to claim 1, wherein said at least one control signal comprises a first control signal indicating a vehicle impact, said first control signal operative to pivot the head restraint front part forward about the rotational axis by a large angular amount, and a second control signal indicating a desired inclination of the head restraint for the purpose of adjusting the inclination, said second control signal being operative to pivot the head restraint front part by settable angular amounts.

5. Vehicle seat according to claim 4, wherein the driving device comprises an element, in particular a Bowden cable device (19; 115), which acts at least indirectly upon the head restraint front part, as a force-transmitting element.

6. Vehicle seat according to claim 4, wherein the driving device comprises an electric motor (21) as a first driving element for adjusting the inclination.

7. Vehicle seat according to claim 6, wherein the electric motor also brings about the pivoting forwards in the event of a vehicle impact.

8. Vehicle seat according to claim 7, further comprising an electronic control signal transmitter which activates the electric motor, detects the approach of another vehicle and/or the approach of the vehicle occupant onto the backrest and makes an evaluation under predetermined path/time criteria and, when the latter are satisfied, emits a second control signal which indicates a vehicle impact which is imminent or has taken place.

9. Vehicle seat according to claim 4, further comprising a mechanical actuator (113; 213) or signal transmitter for the first control signal, which detects the acceleration imparted in the vehicle impact to the vehicle occupant and converts it into a driving force for the driving device for the pivoting forwards of the head restraint in the event of the vehicle impact.

10. Vehicle seat according to claim 5, wherein the force-transmitting element (19) acts on a spreading-lever device (17), which is arranged between the head restraint rear part (9) and the head restraint front part (13) and, in particular, is spring-loaded, in such a manner that the transmission of a tensile force causes the head restraint front part to spread away from the head restraint rear part about the rotational axis (15).

11. Vehicle seat according to claim 10, wherein the spreading-lever device (17) has an arresting device for arresting it in the spread-out position, in particular in a position beyond the dead center.

12. Vehicle seat according to claim 5, wherein the tension element (19) has a connecting or branching point (20) on which firstly a driving element

engages for adjusting the inclination and secondly a driving element for pivoting the head restraint forwards in the event of a vehicle impact engages.

13. Vehicle seat according to claim 12, wherein a coupling element (20) for the fixed connection of the Bowden cable (19) to two wire pulls (19.1, 19.2) is provided at the connecting or branching point.

14. Vehicle seat according to one claim 4, further comprising an active tension element connected to an electric motor, in particular a Bowden cable device, is fitted to the head restraint front part, and a passive compression-spring element which is supported against the head restraint rear part and prestresses the head restraint front part forwards is arranged between the head restraint rear part and head restraint front part.

15. Vehicle seat according to claim 14, wherein the passive compression-spring element has a steel helical spring.

16. Vehicle seat according to claim 4, wherein an active, in particular self-locking, compression element connected at least indirectly to an electric motor is fitted to the head restraint front part.

17. Vehicle seat according to claim 16, wherein the active compression element is designed as a rack of a rack-and-pinion device arranged between the head restraint rear part and the head restraint front part.

18. Vehicle seat according to claim 16, wherein the active compression element is designed as a piston rod of a piston/cylinder device which is arranged between the head restraint rear part and the head restraint front part and is indirectly driven by an electric motor via a hydraulic pump.

19. Vehicle seat according to claim 4, further comprising an electronic control unit which is connected to a control signal input of the driving device and has, in particular, an inclination-angle memory for storing a plurality of

predetermined angular positions of the head restraint front part about the rotational axis, for the outputting of the second control signal.

20. Vehicle seat according to claim 19, further comprising a motor-powered or hydraulic driving device for adjusting the height of the head restraint.

21. Vehicle seat according to claim 20, wherein the electronic control unit has a vertical-position memory for storing a predetermined number of height settings of the head restraint, which memory is in particular designed so that it is connected to, or interacts with, the inclination-angle memory in such a manner that a plurality of angular-position/height-position pairs of values for setting the head restraint can be stored in the control unit.

22. Vehicle seat according to claim 4, wherein the driving device for the pivoting forwards of the head restraint is height-adjustable together with the head restraint, in particular by means of a drive for adjusting the height.

23. Vehicle seat according to claim 9, wherein the mechanical actuator or control signal transmitter for the first control signal has a compression plate which is arranged in the backrest and can be moved parallel to the direction of travel with respect to an essentially rigid frame of the backrest by a movement component.

24. Vehicle seat according claim 9, wherein the mechanical actuator has a plurality of primary tension elements (113; 213) which are each fastened by at least one end to a backrest frame (109, 111; 209, 211) and are arranged in the displacement region of the vehicle occupant, and a secondary, elongated tension element (115; 215) which is connected by at least one end to the backrest frame and at at least one point to the head restraint front part (105C; 205C) or to the associated driving device and in whose longitudinal profile the primary tension elements engage in an essentially alternating manner from opposite sides in such a manner that when the primary tension elements are acted upon by a

displacement of the vehicle occupant, the said secondary tension element is deformed in an essentially zigzag or meandering manner and in the process drives the head restraint front part or controls the driving device thereof.

25. Vehicle seat according to claim 24, wherein the primary tension elements (113; 213) are designed as essentially inextensible wires or strips which run transversely or obliquely with respect to the direction of displacement of the vehicle occupant and transversely or obliquely with respect to the longitudinal axis of the secondary tension element, loop in particular around the secondary tension element (115; 215) and are fastened by both ends to the backrest frame or are fastened by one end in each case to the backrest frame (109, 111; 209, 211) and at the free end have a hook or a loop with which they grip around the secondary tension element, or which are fastened by one end to the backrest frame and by their free end are connected fixedly to the secondary tension element.

26. Vehicle seat according to claim 24, wherein the secondary tension element (115) is designed as an essentially inextensible, markedly flexible wire or an inextensible, flexible strip.

27. Vehicle seat according to claim 24, wherein the primary tension elements are formed by in each case at least one surface-type tension element which is arranged on the one side of the secondary tension element and grips around the latter at a plurality of points, or is fastened thereto at a plurality of points, in particular are formed as an essentially inextensible lattice, braided or woven structure.

28. Vehicle seat according to claim 24, wherein the primary tension elements (113; 213) are fastened in an alternating manner to the opposite side cheeks (111; 211) of the backrest frame and the secondary tension element (115; 215) is fastened to a transverse support in a lower or upper end region of the backrest or to a transverse support of the seat part.

29. Vehicle seat according to claim 24, wherein the primary tension elements (113; 213) and the secondary tension element (115; 215) are arranged behind a backrest upholstery of the vehicle seat.

30. Vehicle seat according to claim 24, wherein the primary tension elements (113) and the secondary tension element (115) are fitted into a planar load-distributing element (119), in particular a load distributor plate which covers over at least their connecting regions from the vehicle occupant.

31. Vehicle seat according to claim 4, wherein the driving device has an energy accumulator which is connected to the head restraint front part and is acted upon by the control signal, in particular a compression-spring device which is supported against the backrest or the head restraint rear part and is prestressed against the head restraint front part.

32. Vehicle seat according to claim 31, wherein the energy accumulator is assigned an arresting and/or a damping device which prevents the receding of the head restraint front part directly after the pivoting forwards, or makes it substantially more difficult.

33. Vehicle seat according to claim 32, wherein the damping device comprises a hydraulic or frictional damping element.